NORTHERN REGION
ENVIRONMENTAL MONITOR

Fall 1999 U. S. Army Northern Regional Environmental Office

Munitions Rule Training at Fort Drum Includes State Regulators

By Bob Muhly,
Army Region I/II REC
Andy Caraker,
NREO Project Manager

A New York State Department of Environmental Conservation (DEC) policy analyst and four DEC inspectors participated in a unique joint military/regulator munitions rule training course conducted at Fort Drum, New York on September 15–16. Sponsored by FORSCOM, and funded out of Fort Drum's environmental training budget, the two-day course delivered by Radian Corporation was part of FORSCOM's ongoing efforts to make intensive munitions rule training available to its installations' personnel.

The invitation to DEC to participate in the course was engineered by the NREO in consultation with FORSCOM and Fort Drum environmental and munitions staff. Since state inspectors generally lack experience with munitions, the intent was to provide practical instruction in activities regulated under the Military Munitions Rule, and to give inspectors a better understanding of the comprehensiveness and care inherent in the military's munitions management operations.

Initially, there were some reservations on both sides of the regulatory fence about sharing the same classroom on such a sensitive subject. However, as the training proceeded, it was evident that such issues as what is and is not a waste, length of storage, and munition items stepping into and out of the solid waste circle could be discussed and resolved, to the enlightenment of both sides. A camaraderie between regulators and regulated seemed to develop.

Michelle Ching, who headed DEC's munitions rule-writing team, termed the training "very helpful for the state inspectors." She noted particularly that the two days of interaction between military and DEC personnel contributed to markedly improved two-way communication and understanding. Overall, Ms. Ching described the outcome as "overwhelmingly positive." According to Ms. Ching, DEC plans to take what she and the others learned and incorporate it into training to be given to all DEC munitions rule

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WALTER REED FIRST TO GET EMR IN REGION III

By Fred Boecher, *Army Region III REC*

Walter Reed Army Medical Center was recently the first DoD facility in Region III to have an environmental management review (EMR) performed. What is an EMR? Is it an inspection? Will my facility get one? Who conducts them? These are just a few of the questions you may have addressing this relatively new program being implemented by the U.S. Environmental Protection Agency (EPA). Let's try to answer some of these questions.

WHAT IS AN ENVIRONMENTAL MANAGEMENT REVIEW?

An EMR is an evaluation of an individual federal facility's program and management systems to determine how well the facility has developed and implemented specific environmental protection programs to ensure compliance. EPA conducted 23 pilot EMRs in eight EPA regions under an interim policy and guidance dated May 21, 1996. A final EMR policy was signed by Steve Herman, the Assistant Administrator for the Office of Enforcement and Compliance Assistance, and issued December 12, 1998. The Walter Reed EMR was one of the first conducted by EPA under this final policy.

WHAT IS THE SCOPE OF AN EMR?

The EMRs are based on a combination of the Code of Environmental Management Principles (CEMP) and ISO 14001 criteria. There are seven disciplines that can be reviewed during an EMR. The seven areas of review or disciplines are derived from the *Phase III U.S. EPA Generic Protocol for Conducting Environmental Audits at Federal Facilities, December, 1996.* These disciplines are: organization structure; environmental commitment; management commitment to the environmental program; resources; internal and external communications; program

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IN THIS ISSUE

From the Chief

By Bill Herb
Chief, NREO

> *"Because of the structure of the NREO, our operations are a bit more complex than most, so I thought I would take this opportunity to try to explain how we function."*

Maybe some of you noticed that this feature was missing from the last issue of the Monitor. Or maybe you didn't. Or maybe you were glad that it was gone. Nonetheless, the NREO chief's "editorial" has returned.

In early June, Carl Pavetto, the Chief of the NREO and the DoD Regional Environmental Coordinator (REC) for Region V, moved on to the pastures of private-sector employment. At that time I stepped in to serve as the "actor" in both positions. If you are observant and have a good memory, you might recall that I also was the "actor" for Carl when he was assigned to the Joint Program Office at Massachusetts Military Reservation during 1998.

Although the Army's Regional Environmental Offices (REOs) are staffed at a relatively low level, our operations are rather complex, if not baffling. Because of the structure of the NREO, our operations are a bit more complex than most, so I thought I would take this opportunity to try to explain how we function.

When I wear my hat as the chief of the NREO, my support staff and I are charged with supporting the Army RECs for Regions I, II, III, and V and their activities in about 20 states and two territories. The Army RECs for these regions report to this office, but with the exception of the Army REC for Region V, they coordinate their activities with DoD RECs for Regions I, II, and III, provided by the Air Force (Region II) and Navy (Regions I and III).

On the other hand, when I wear my DoD Region V REC hat, my support staff and I are charged with coordinating and facilitating DoD environmental issues within Minnesota, Michigan, Ohio, Indiana, Illinois, and Wisconsin. And even though the component (service) RECs for Region V coordinate their activities with this office, they report to their respective chains of command in the Air Force, Navy, and Defense Logistics Agency. In spite of the fact that I am the DoD REC for Region V, and in spite of the fact that we maintain an Army REC in Chicago, I am located at Aberdeen Proving Ground, Maryland.

Now that that is clear, I would like to touch on some issues that I see coming up across the NREO area of responsibility.

- First, as the states begin enforcement of the munitions rule, I think we need to be alert to the fact that most of these regulators will need training in both the rule itself, and in munitions operations on DoD facilities. Some efforts have been made in this direction, notably in New York and New Jersey, and we need to be alert for other opportunities.
- Second, the issue of Underground Storage Tanks (USTs) has not gone away. This office has distributed "state inventories" of USTs to Army installations in Region III (which were compiled by the DoD REC for Region III), and plans to compile and distribute such inventories for Region V. These lists let installations know what the states think the inventories really are.
- Third, we are all going to be seeing continuing multimedia inspections of our facilities. We are in the process of obtaining EPA's multimedia "checklists" for each of the Regions in the NREO area, and will distribute them as soon as possible.
- And fourth, the Army will be making a strong effort to reduce the number of new and open Notices of Violation. If any installations want the assistance of the NREO in this effort, with the concurrence of your MACOM, of course, please contact your respective Army REC.

It's great to be back in the world of Regional Environmental Offices, and I look forward to facing our mutual challenges.

Northern Regional Environmental Monitor

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Our Mission: *The NREO was established in 1995 to support the Army and DoD mission through coordination, communication and facilitation of regional environmental activities. The Army REOs are part of a DoD network in which the Army, Navy and Air Force each has lead responsibility for mission implementation in the federal regions. The NREO has DoD lead responsibility for Region V, and Army lead responsibility for Regions I, II, III and V.*

New AEC Guidance Available

One of the responsibilities of the Environmental Quality Division of the U.S. Army Environmental Center is to coordinate the development and distribution of media guidance documents. The documents are intended to make regulatory life a little easier for MACOMs and their installations by helping them keep pace with evolving requirements. This article summarizes some recent efforts.

[From Staff Reports]

Installation Pretreatment Program Protocol

Army installations may be required to establish pretreatment programs if they discharge their wastewater to a Publicly Owned Treatment Works. Current DoD negotiations with the U.S. Environmental Protection Agency (USEPA) may result in such requirements even if discharging to federally owned facilities. USAEC has developed a guide for installation pretreatment programs which includes a pretreatment protocol, a sample installation pretreatment program, a computer automated version of the protocol in Access 2.0, and a user's guide. The U.S. Army Corps of Engineers Construction Engineering Research Laboratory is scheduled to distribute the final document to MACOMs and installations within the next two months.

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Disinfectant/Disinfection By Products Rule & Interim Enhanced Surface Water Treatment Rule Guidance Document

The USEPA issued the Disinfectant/Disinfection By-Products Rule and the Interim Enhanced Surface Water Treatment Rule (D/DBP & IESWTR) on December 16, 1998. The rules regulate disinfectants and disinfection by-products and expand the current Surface Water Treatment Rule to include cryptosporidium. The new rules may require increased costs for treatment, monitoring, system upgrades, construction, record keeping, and other compliance activities. USAEC has worked with USACHPPM to develop a general guidance document that includes data and information collection requirements and guidance on possible system upgrades and other compliance activities. Copies were distributed to the MACOMs in October for redistribution to installations.

For further information contact: Misha Turner, USAEC,
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ECAS User's Guides

The USAEC ECAS Team publishes a series of 13 User's Guides which contain environmental compliance requirements assembled by functional area. Guides help installation operators to perform self-checks on requirements related to their activity without referring to lengthy assessment protocol documents. The ECAS Team updates the guides as needed and recently placed five revised editions on DENIX: Air Emissions; Compliance in the Field; Motor Vehicle Maintenance Facilities (second edition); Storage Tanks and POL; and Warehouse, Storage, and Hazardous Waste Facilities. The guides join four others on DENIX: Motor Pool Vehicle Maintenance Areas (first edition); Water Treatment Systems; Natural and Cultural/NEPA; and Open Burning/Open Detonation. The DENIX address is: http://www.denix.osd.mil/denix/DOD/Library/Guides/series.html.

For further information contact:
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Clean Air Act Compliance Guidance for Fog Oil Smoke

Some environmental regulators have had questions about Clean Air Act (CAA) compliance during obscurant training. To help installations use environmental impact reports to educate their regulators on fog oil smoke's actual CAA compliance impacts, USAEC commissioned the Edgewood Research Development and Engineering Center (ERDEC) to summarize, compare, and critique the methods and results of these studies. Additionally, USAEC prepared reports describing fog oil smoke training and its importance to national defense. Copies of the ERDEC and USAEC reports were scheduled to be distributed to MACOMs and installations in October 1999.

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Northern Region

Pollution Prevention Partnerships Update

[From Staff Reports]

Illinois

The DoD/Illinois P2 Partnership has completed design of its website, and is working to resolve format issues with the DENIX webmaster. It also has agreed on the final language of a brochure describing the P2 opportunity assessment program that will be distributed within the state to encourage more interest in the no-cost, confidential evaluation offered by the partnership. The first P2 opportunity assessment has been completed (Great Lakes Naval Training Center) and its results have been presented to partnership members. The next meeting will be hosted by the EPA Regional Office in Chicago. Focus of that meeting will be on setting goals for FY 2000. EPA Region V and the U.S. Army Construction Engineering Research Laboratory will serve as the civilian and DoD co-chairs, respectively, for the next year.

For further information contact:
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Indiana

The DoD/Indiana P2 Partnership held its third meeting on September 10 in Indianapolis, hosted by the Indiana Department of Environmental Management (IDEM). Wording for the partnership's charter has been finalized, and preliminary arrangements have been made to establish a partnership List-serve and web site. Based on priorities established by the partnership, the next meeting will focus on parts cleaning options with a speaker from the Indiana Clean Manufacturing Technology Institute. The next meeting is scheduled for December 10 in Indianapolis, with IDEM again serving as host.

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Michigan

The DoD/Michigan P2 Alliance met on August 26 in Battle Creek, hosted by the Defense Reutilization and Marketing Service (DRMS). The draft charter wording was agreed to and will be finalized through the assistance of the graphics section of the U.S. Army Tank Automotive and Armaments Command (TACOM). DRMS briefed the members on its activities and future initiatives to become more customer-oriented. Top P2 priority issues that the Alliance has chosen to address are purchasing/inventory control, vehicle parts cleaning, paint wastes, small arms range issues, and expired shelf life items. The Alliance also intends to pursue development of a List-serve and a web site. Co-leads for the Alliance are TACOM and the Michigan DEQ. The next meeting will be held in Alpena, hosted by the Michigan Air National Guard Combat Readiness Training Center.

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New York

The New York State Department of Environmental Conservation (NYSDEC) sponsored its 12th Annual Pollution Prevention (P2) Conference in Rochester, NY, from August 24-26. Participants came from large and small private industrial corporations as well as federal and state agencies. The second day included a DoD panel session during which Service RECs discussed their specific Service P2 initiatives. Joe Shandling, Environmental Branch Chief of the U.S. Army Garrison, West Point, presented the garrison-produced video, "Stewards of the Castle," which won the 1999 New York Governor's Award for P2 in the federal agency category.

The DoD/New York P2 Partnership conducted a regular business meeting in conjunction with the conference, and reached a milestone with the official signing of the partnership's Charter. Signatories include military installations within the state, the New York State DEC, and the DoD and Service RECs.

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Ohio

On August 19 in Columbus, the Ohio Environmental Protection Agency (OEPA) briefed the DoD/Ohio P2 Partnership on the final report of the P2 opportunity assessment conducted on paint operations at the Springfield Air Guard Base. The assessment marks the partnership's first completed activity, and the beginning of a series of opportunity assessments to be conducted by the partnership at other DoD entities in the state. Options for awards to be given by the partnership for outstanding efforts in the P2 area, as well as other partnership activities, continue to be discussed.

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Wisconsin

The Wisconsin Department of Natural Resources (DNR) presented guidance on oil/water separators at the September 9 meeting of the Wisconsin/DoD Pollution Prevention Alliance in Milwaukee. The Army Reserves served as the host organization. Advanced Waste Services, a private company, gave a briefing on its services for handling oily liquids and sludges and other non-hazardous wastes, and followed this up with a tour of the company's treatment facilities. Alliance members discussed creation of a web site, and agreed to develop the site under the auspices of the Wisconsin DNR web site. The next meeting is scheduled to be hosted in Madison, by the Wisconsin Army National Guard.

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New England Tribes and Federal Partners Meet

By Joel Ames
Navy Northeast Region Tribal Programs Coordinator

Tribes in Region I and federal agencies with interests in the region met the first week of June in Bar Harbor, Maine, to discuss tribal and federal government environmental issues. The forum was the 1999 New England Environmental Tribal Training Conference.

Represented were the nine federally recognized tribes: Houlton Band of Maliseet Indians (ME); Passamaquoddy Tribe, Indian Township (ME); Passamaquoddy Tribe, Pleasant Point (ME); Penobscot Nation (ME); Aroostook Band of Micmac Indians (ME); Mashantucket Pequot Tribe (CT); Mohegan Nation (CT); Wampanoag Tribe of Gay Head (Aquinnah) (MA); and the Narragansett Tribe (RI).

Federal agencies represented included the U.S. Environmental Protection Agency, the Department of Defense, the U.S. Navy, the U.S. Army, the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs, the U.S. Coast Guard, the U.S. Department of Agriculture, the National Oceanic and Atmospheric Administration, the Agency for Toxic Substances and Disease Registry, and Indian Health Services.

The day before the conference officially opened, participants were invited to attend a traditional men's and women's sweat lodge, held at the Penobscot Nation. The sweat lodge is a purification and cleansing ceremony and one of the highest spiritual rites continuing today. Those federal agency representatives who attended remarked that they had come away from the ceremony with a deeper understanding of tribal culture.

The conference began with a tribal invocation given by Butch Phillips and Jerry Pardilla of the Penobscot Nation. Each tribe then described its environmental programs and issues of concern. One of the common threads that ran throughout the discussions was the commitment of the tribes to the Earth and their respect for its natural resources. Later in the day Kathy Gorospe, Director of EPA's American Indian Environmental Office, gave her views of the EPA Indian Program and the direction it is heading. John DeVillars, EPA Regional Administrator for Region I, followed with a discussion of the Region's goals and commitment to the tribes in the region. Mr. DeVillars described the increase in both staffing and budget related to tribal concerns, and recognized Jim Sappier, EPA Regional Tribal Program Manager, for his work in integrating tribal concerns into EPA Region I's other areas of responsibility.

The second day was devoted primarily to EPA. The morning session included an update on the EPA National Indian Policy and a briefing on the status of the Regional EPA Indian Policy. There also was an in-depth discussion of lead paint safety and lead impacts on children. Joe DeCola, from the EPA Office of Solid Waste and Emergency Response, discussed the availability and management of the EPA Grants Program. John Banks, of the Penobscot Nation, showed a moving video about the Penobscot River and its tie to the tribe. Afterward he discussed the tribe's concern about the health of the river, some of the discharges of concern, and what the tribe is doing to monitor water quality and assist in the river's cleanup.

The afternoon was used for discussions relating to children's health initiatives, Superfund, tribes as states, and quality assurance plans. Jerry Pardilla, Executive Director of the National Tribal Environmental Council, discussed the Nation Agenda, shared information resulting from the Nation Conference (May 18-20, 1999 in Eureka, CA), and talked about the need for tribes to carefully study issues that could potentially impact all of Indian Country. There also was a concurrent session related to GIS - GPS headed by Dinalyn Spears-Audette, Narragansett Natural Resources Director, and Jerry Barns, Penobscot Nation Water Resources Specialist.

The third day was Federal Partners Day, during which federal agencies discussed their programs and related tribal issues. Elsie Munsell, Deputy Assistant Secretary of the Navy, opened with a talk on the Department of Defense American Indian and Alaska Native Policy. Ms. Munsell stressed DoD's commitment to work with the tribes and to ensure that tribes are consulted when projects have the potential to affect them. Joel Ames, the Navy's Northeast Region Tribal Programs Coordinator, spoke about the DoD American Indian and Alaska Native Training Program. The course will be used at the executive level to provide guidance on working effectively with tribes and how best to implement the DoD Indian Policy. John Stacy (Office of the Assistant Secretary of Defense) talked about the NALEMP Program, its funding, and the project selection factors. He also described several current projects and discussed their status.

The early part of the afternoon was spent addressing spill response planning and cleanup and the need to involve tribes in the planning process. A key issue for tribes is the protection of sensitive sacred and cultural sites. Presenters included Art Johnson (EPA Headquarters), Dorrie Paar (EPA Region I Emergency Response Division), Commander Scott Graham (Chief of Planning and Response, USCG First District), and Scott Lundgren (Environmental Specialist, USCG). Steve Lehmann, NOAA Scientific Support Coordinator, followed with a presentation on NOAA's involvement in a spill response, explaining how NOAA predicts spill fate and potential impacts.

The Indian Law Roundtable Day of the 1999 conference was a follow-up to the first Indian Law Roundtable held July 18, 1995. The objective of the second Roundtable was to continue the dialogue between New England tribal and federal government attorneys on environmental matters and to assist the tribes in their continuing efforts to expand capacities

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Industries of the Future Target High Energy Users

By Hugh McAlear
Army Region V REC

The Industries of the Future (IOF) is a relatively new industry-led program that is supported by the federal government through the Office of Industrial Technologies of the U.S. Department of Energy (DOE). The program currently is focusing on nine energy intensive industrial sectors: agriculture, aluminum, chemicals, forest products, glass, metal casting, mining, petroleum refining, and steel. In each sector, DOE and major trade organizations have signed agreements to pursue practices and technologies that will improve energy effectiveness, environmental performance and economic effectiveness. The target date to reach the desired endpoints is the year 2020. Industry and DOE annually determine jointly funded research and development projects to fulfill the vision/ roadmap objectives.

The IOF is primarily being run on a "State" basis. Approximately 15 states have initiated IOF activities. Within the Midwest, state-level IOF activities have been initiated in Illinois, Michigan, Ohio and Wisconsin. Regional IOF activities also are underway, one of which was the regional workshop held as a follow-on to the Great Lakes Regional Pollution Prevention Roundtable meeting in Traverse City, MI, in August of this year. Additional regional activity plans are underway as well as broader information program efforts, demonstration/showcasing of improved technologies, broadening the base of small-medium size businesses involved in IOF, and expanding "teaming" efforts among industry and universities in the region, focused on IOF objectives.

Although the Department of Defense is not a targeted industry sector under the IOF program, there are other similar initiatives within the federal sector to reduce energy usage. And, the technology improvements and progress made under the IOF program may well prove to be applicable to DoD activities. Information on the IOF program can be found at the DOE/OIT web page at http://www.oit.doe.gov/

More information on the IOF program can be obtained from either Tom Borton, Thomas Borton Associates, Inc., (734) 475-4244, or Julie Nochumson, Industrial Programs Manager, DOE Chicago Support Office, (312) 886-8579.

Fort Drum

(From page 1)

inspection personnel.

The afternoon before classsroom training began, the DEC staff was given a tour of Fort Drum's ammunition supply point (APS) facilities. Departing from Fort Drum's Directorate of Logistics (DOL), the bus tour made stops at the bunker storage area, the dismantling area, and the separation/re-configuration area. During planning, there had been a question of whether the tour would be most useful before or after the classroom work. Consensus among DEC staff was that the tour in advance of the formal training better enabled them to visualize operations when Munitions Rule Implementation Plan policy was discussed in the subsequent classroom sessions.

Since a majority of the DOL personnel attending the training did not have an extensive background in the environmental regulatory arena, the course opened with an overview of the Resource Conservation and Recovery Act (RCRA), covering topics relevant to the munitions rule (e.g., what is classified a solid waste, when it is classified a waste, and the characteristics and categories of hazardous waste).

Following the RCRA overview, the balance of the training covered standard military munitions operations, storage, training, and disposal procedures and the applicability and effects of the Military Munitions Rule. One concept that proved difficult for some of the DEC staff is that a munition can be stored for 40 years or more and still be viable and useful, and therefore not a waste. Following explanations from course instructors and Fort Drum DOL personnel, length of storage ceased to be an issue.

Explosive Ordnance Disposal (EOD) personnel attended the second day to discuss emergency disposal and detonation procedures, permit requirements, and the memorandum of understanding between EOD and DEC. The DEC staff attending the course noted their appreciation that the EOD is available through the MOU to perform emergency responses for offpost, non-military explosives, which in the recent past have included pipe bombs, other explosives and even two trailer-loads of fireworks.

The training concluded with a tour for DEC staff of one of Fort Drum's active ranges.

New York representatives join Fort Drum and other military personnel in munitions rule training at Fort Drum on September 15 -16

For further information on the training at Fort Drum, contact: Mr. Muhly, (410) 436-7101, DSN 584, e-mail: robert.muhly@aec.apgea.army.mil

For information on NREO activities to support similar training in other states contact: Mr. Caraker, (410) 436-7098, DSN 584, e-mail: andrew.caraker@aec.apgea.army.mil

Rock Island Arsenal Forms P2 Partnership With the City of Rock Island

By Hugh McAlear
Army Region V REC

In a natural evolution of pollution prevention partnerships, Rock Island Arsenal (RIA) has taken the concept of partnering espoused in the DoD/ Illinois P2 Partnership and extended it to a similar collaborative arrangement between RIA and the City of Rock Island. The arsenal/city partnership became effective in April 1999.

The City of Rock Island is a player in RIA's environmental program because it services the installation's sanitary sewage system. Sewage is pumped from the arsenal to the Rock Island city treatment facility under terms of a permit held by the city. While the city lacks the broad regulatory powers and penalty authority of the state and federal EPA, it can refuse to take sewage from the arsenal if violations of the permit conditions occur.

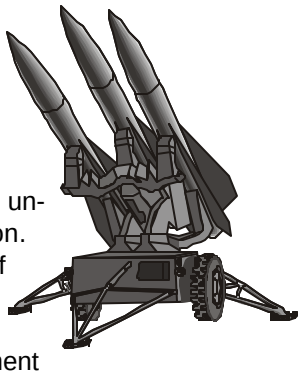
The partnership strengthens the already cordial relationship between RIA and the City of Rock Island. Dr. David Ross of RIA's Science and Engineering Directorate, who serves as the arsenal's environmental coordinator, explained, "We already know each other well and have worked closely with one another in the past. The partnership gives us a new tool we can use in sharing ideas and coming up with mutually beneficial solutions to problems."

According to Dr. Ross, RIA and the city will use the partnership to reduce the amount of hazardous and toxic material found in the sewage generated by the arsenal. Emphasis will be placed on eliminating waste at the source.

"This partnership represents a big step forward in setting the focus of our environmental program on preventing pollution," Dr. Ross concluded, "rather than cleaning up contamination from the past."

For further information on the pollution prevention partnership between RIA and the City of Rock Island, contact Dr. David Ross (309) 782-7855.

Corps of Engineers Holds FUDS Program Review in Minneapolis



By Hugh McAlear
Army Region V REC

Minneapolis served as the host city for the most recent U.S. Army Corps of Engineers (USACE) review of the Defense Environmental Restoration Program (DERP) – Formerly Used Defense Sites (FUDS) Program. Participants at the August 2-5, 1999 meeting were USACE headquarters staff, Corps Division program managers and Corps District personnel involved in executing the FUDS program.

The major portion of the review was dedicated to discussion of internal management improvements and approaches being considered as a result of the FUDS Efficiency Review undertaken by the Office of the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health. Workplan execution and funding obligation status were reviewed for FY 99, and management initiatives such as the new and improved Formerly Used Defense Sites Management Information System (FUDSMIS) were discussed. Integrating the activities of the Huntsville Center of Excellence for Ordnance and Explosive Waste (OEW) into the Corps District FUDS execution workplan is a priority.

Participants were briefed on the unique Multi-Site Agreement between the Pennsylvania Department of Environmental Protection and the Military Services. The agreement establishes the framework for a consistent statewide approach and program efficiencies, and the collaboration and coordination among the parties engendered by the agreement are generally viewed as having resulted in enhanced business development and recycling of property. Briefers observed that Pennsylvania's Land Recycling and Environmental Remediation Standards Act provides the voluntary incentives that make such an agreement desirable and workable, and cautioned that such an agreement may be difficult to replicate in other states without similar legislation.

Representatives from USEPA headquarters and the states of Minnesota and Ohio spoke of their need to be kept informed on FUDS activities and to be able to provide early comment on alternatives and approaches under consideration. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO), which has been critical in the past, urged the Corps of Engineer Districts to be more communicative on FUDS activities. The new Cooperative Agreement procedure that has been adopted to implement the Defense/State Memoranda of Agreement (DSMOA) should help to resolve these concerns as the procedure requires the FUDS manager and the state regulatory agency jointly to develop two-year and longer range workplans.

The Army Regional Environmental Coordinator (REC) for Region V briefed the REC program and functions, and offered the assistance of the REC organization to help bridge the gap between regulator entities and Corps entities.

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Sustaining the Mission Using Prescribed Fire at Fort Drum, NY

by Helene Cleveland
AEC/Forest Service Projects Coordinator

Forest Service personnel instruct soldiers from the U.S. Army, 95th Engineers, on the proper methods of brushpile fire suppression during field training exercises held at Fort Drum, NY, on 26 April 1999

Soldiers must train in the environments they will eventually fight in. Grasslands and open meadows are two of the environments that soldiers at Fort Drum, New York, require for certain types of military maneuver training. To maintain and increase the amount of grasslands and open meadows, the Integrated Training Area Management (ITAM) program is using a different maintenance tool – prescribed fire. Normally, efforts are put into fire suppression and prevention. However, fire is a part of the northern ecosystem, and using fire under controlled circumstances can have ecological, as well as military, benefits.

Unless grasslands and meadows are mowed or somehow mechanically altered, the areas eventually succeed to shrublands and woodlands, a less preferred environment for some maneuvers. The objective of the prescribed burn program is to enhance training by providing more open space for maneuvers. More open space would allow soldiers to disperse over larger areas, thus reducing potential impacts from concentrated training.

The program started in 1997, when Tom Lent (then the Land Rehabilitation and Maintenance Coordinator and now the ITAM Coordinator) contacted Mark Cleveland (the Forest Service Liaison at the Army Environmental Center) for assistance. Cleveland asked the fire specialists on the Green Mountain and Finger Lakes National Forests (located in Vermont and New York) to assist Fort Drum in providing the technical support in training, planning, and implementing a large burn program.

In 1998, the Forest Service conducted basic firefighting courses for Fort Drum civilian, military, and contract-support personnel. Approximately 950 acres were prescribed burned. The areas were chosen by Lent, Public Works Environmental Division specialists, and Range Division personnel. Hands-on experience was gained by the trainees in a number of areas, including building control lines, igniting the areas, and 'mopping up' after the burn.

Due to thick brush and other safety concerns, it was decided that aerial ignition would be a better tool to utilize in firing many of the identified units. Thus in 1999, 2,050 acres were ignited using firing devices attached to a helicopter. Some areas, such as a 1400-acre portion of the Impact Area (main bombing range), were fired from the edge of the units, letting the fire burn through them. The work is made easier by using the extensive road system and natural barriers to control the fire.

A burn plan is developed for each unit and a prescribed fire is ignited only if the weather conditions are within the parameters listed in the plan. Some of the parameters considered are wind speed and direction, days since the last rainfall, relative humidity, and temperature. Weather is monitored continuously before and during the burn. Part of the plan includes locating plots to monitor changes in vegetation. Fort Drum also will use satellite imagery to monitor vegetation.

During the last two years other agencies have assisted with the burn, including personnel from New York State, the U.S. Army Corps of Engineers, and the U.S. Air Force. This program will allow Fort Drum to develop closer partnerships with neighboring agencies to assist firefighters with training needs and experience.

Green Mountain personnel also instructed an 18-person Army Detachment from Fort Drum in basic firefighting. The soldiers were slated to go to Haiti and requested basic fire training to assist with their mission. As part of the field training, the soldiers assisted with a prescribed burn. A few days after this training, the Green Mountain received the following from the soldiers' commander:

"Just wanted to let you know how appreciative we are for you and your team's help this week. Our training was excellent. As a matter of fact, yesterday there was a mishap on the hand grenade range where a flash grenade ignited the entire range on fire. Our fire fighters were given the mission to put it out. I deployed two brush trucks, a tanker, and 12 men to the scene. It took 8 hours to get the front of the fire all under control. My men are out there this morning mopping up the smoldering trees and stumps. Our ability to react quickly and do our job the correct and safe way is a direct result of

EMR (From page 1)

evaluation and reporting; and environmental planning and risk management. Typically an EMR will not attempt to review a facility's environmental management program as it pertains to all seven disciplines. Instead, an EMR will generally focus on only one or two disciplines to determine if the facility's program conforms to discipline requirements. In the Walter Reed EMR, two disciplines were reviewed: organizational structure, and environmental planning and risk management.

Who actually conducts the EMR?

EMR are conducted by a team of EPA regional staff with assistance from qualified contractors when appropriate. The Walter Reed EMR team of four members was led by Bill Arguto, the EPA Region III Federal Facility Coordinator.

How long will the EMR team be on site?

A typical EMR will take one to three days to conduct. The EMR at Walter Reed lasted two days.

Who determines what facilities will receive an EMR?

EMRs are voluntary and need to be requested by the facility itself. However, since each of the EPA regional offices is committed to performing between three and five EMRs a year, a regional office may contact some facilities to determine if there is any interest on the facility's part. Walter Reed volunteered to have an EMR conducted.

What does the facility have to do to prepare for the on-site review?

Before the EMR is conducted, both the facility and EPA sign a confirmation letter. The letter confirms the dates of the EMR and states what EPA will need to see and with whom EPA will meet. In the case of the Walter Reed EMR, EPA requested that a number of documents and reports be provided to them prior to the on-site visit. Since the Walter Reed EMR focused on organizational structure, and planning and risk management, the documents requested included such things as organizational charts, job descriptions, environmental planning documents, business and strategic plans, and environmental risk tracking and trends reports.

What happens during and after the EMR?

Each EMR includes an in-briefing and an exit-briefing, or a close-out session, in which preliminary EMR results are shared with the facility. The primary means of collecting information during the EMR is through interviews with various facility personnel. Within 60 days after the site visit, EPA will provide the facility with a written report discussing the conclusions of the EMR and making recommendations for follow-up activities. The facility will prepare a written response to the EMR report within six months of receiving it explaining how it intends to address any issues raised in the report. During this six-month period EPA generally will not conduct inspections at the facility unless the inspection is required by statute, regulation, or EPA policy. Within twelve months of the final EMR report, the EPA regional office will make a courtesy contact with the facility to determine the ultimate EMR usefulness, and whether any follow-up assistance is requested.

What happens if a violation is found during the EMR?

The purpose of an EMR is not to assess the compliance status of a federal facility. There may, however, be circumstances when an EMR uncovers violations either through document review or while on site. EPA's Office of Enforcement and Compliance Assistance has developed enforcement response policies for several programs with industry such as the Environmental Leadership Program, the Common Sense Initiative, and Project XL, that detail how violations will be treated if they are discovered as part of these programs.

The Incidental Violations Response Policy (IVRP) addresses how incidentally uncovered violations will be treated at a federal facility that is participating in an EMR. For violations that may cause imminent and substantial endangerment, the IVRP states that EPA retains full enforcement authority, and the facility must immediately address the violation. For minor violations, EPA will identify the violation as a potential violation, and the facility will have ten days to self-disclose the violation to EPA in writing.

According to Jim Edward, Deputy Director of EPA's Federal Facilities Enforcement Office, of the 23 EMRs conducted so far, in only one instance was there a potential violation. In that instance the violation was referred to the state, which chose to take no action.

The Walter Reed EMR was the first conducted at a DoD facility in the region under the final EMR policy. However, EPA Region III has conducted other EMRs at Department of the Interior facilities. If you think an EMR could be of assistance at your facility, contact your EPA Region's Federal Facility Coordinator.

For more information contact: Mr. Boecher, (410) 436-7100, DSN 584, e-mail: fred.boecher@aec.apgea.army.mil; or Winston Williams, Walter Reed Army Medical Center, (202) 782-0089, DSN 662, e-mail: winston.williams@na.amedd.army.mil

the training we received in Vermont and here at Fort Drum earlier this week. Can't thank you guys enough for the professionalism and mentorship you were able to offer the 95th Engineers (Fire Fighters)."

When forest fires occurred at West Point this summer, personnel from Fort Drum were among the firefighters sent to control them.

The partnership is successful from both agencies' perspectives. The Forest Service is able to assist the Department of Defense with its land management goals while gaining additional training and experience for agency personnel in fire/aviation management. This type of cooperation helps maintain the readiness of firefighters while providing a unique experience for all involved. It also adds variety and depth to the Forest Service's fire/aviation program and directly contributes to the quality of training conducted by the military.

Tom Lent and Fort Drum and Forest Service personnel are already planning for the burns that will occur in fiscal year 2000.

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Groundwater Review Program Helps Avoid Pumping Good Money After Bad

By Mitch Bryman
NREO Environmental Specialist

Too often, groundwater remediation methods like pump-and-treat systems take on a life of their own. Because they are already in the ground, the wells and pumps associated with groundwater pump-and-treat systems continue to operate year after year, despite no or diminishing progress toward meeting cleanup goals. Repeatedly, expensive operation, maintenance and monitoring activities become all too routine. However, a review of the operation and performance of the pump-and-treat system can pinpoint and correct past assumptions and clean up goals and can also help avoid repairing pumps and wells that do not contribute to the remedial end point, monitoring quarterly for years after start-up, analyzing for contaminants that are no longer detected, and maintaining or continuing to operate poorly performing systems.

A February 1998 Army Science Board (Board) study (Evaluation of the Effectiveness of Existing Groundwater Treatment Systems in the U.S. Army) recognized that there is a growing consensus among environmental professionals along with federal and state regulators that traditional pump-and-treat systems may not be the best solution at groundwater remediation sites. The study evaluated the effectiveness of existing groundwater pump-and-treat systems and recommended that the Army employ a team of independent experts to review the Army's largest cost-to-complete groundwater pump-and-treat remediation systems. The Board found that the vast majority of the groundwater treatment systems had little or no ability to determine the effectiveness of how well a pump-and-treat system is performing or when a system has reached the end of its usefulness. This problem is not unique to the federal government or to the military, but has also been faced by private industry. The Board also recommended implementing a groundwater cleanup strategy to cut down on the number of new pump-and-treat systems being proposed in Army environmental programs. In turn, the U.S. Army Environmental Center (AEC) has set up a process known as the Groundwater Extraction and Treatment Effectiveness Review (GWETER). The Review will evaluate the effectiveness of existing and proposed groundwater extraction and treatment systems, and provide a mechanism for Army leadership to assess and defend the effectiveness of funds used toward the construction and long-term operation and maintenance of these treatment systems. The overall objective of the GWETER program is to ensure that cost-effective treatment systems are in place and that these systems are able to meet reasonable goals and objectives while meeting the Army's mission to protect human health and the environment. The Tri-Service Environmental Support Center's Coordinating Committee is working toward implementing the review program for all the military services.

Because operations and maintenance costs largely depend on the remedies selected, the level of these costs are strongly influenced by policy decisions, such as whether the cleanup remedies emphasize treatment or containment.

Operating and Maintaining Groundwater Pump-and-Treat Systems

The Army operates major groundwater pump-and-treat systems at 38 installations, costing approximately $60 million a year in operation and maintenance costs. While the average construction cost for each of these pump and treatment systems is $3 million, the estimated design life exceeds 30 years. Seventy additional major pump-and-treat systems are in the planning stages within the restoration, Base Realignment and Closure (BRAC) and Formerly Used Defense Site (FUDS) programs. Notably, of the treatment systems which have a definable objective, more than 50 percent were designed to contain groundwater contamination plumes rather than to restore the contaminated aquifer.

The numbers point to the fact that operation and maintenance costs constitute a substantial portion of the funds needed to clean up contaminated aquifers even after millions of dollars have been expended to construct the pump-and-treat system. Because operations and maintenance costs largely depend on the remedies selected, the level of these costs are strongly influenced by policy decisions, such as whether the cleanup remedies emphasize treatment or containment. Also, to ensure that pump-and-treat remedies continue to function effectively and that the cleanup protects human health and the

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>
> **Ira May**
> *Senior Geologist, AEC*

environment, operation and maintenance activities continue for decades and, in some cases, indefinitely. For cleanup remedies that the Army has already undertaken or will undertake, current estimates are that about $1.4 billion will be needed for operations and maintenance costs during the next 30 years.

GWETER Process

According to Chairman of the GWETER panel Ira May, Senior Geologist, AEC, the review process incorporates a team of independent technical experts visiting the installation in question and providing an unbiased, independent assessment of the installation's groundwater extraction and treatment system. The process also results in recommendations that highlight potential opportunities to more cost-effectively achieve the prescribed goals of reducing risks to human health and the environment. May further explained that the GWETER is relevant and highly accurate because the process evaluates existing site information, such as system flow rates, extracted water contaminant concentrations, ground water contaminant concentrations, and point-of-compliance measurements. "To fully understand site conditions and develop site-specific cost-reduction strategies, the review team supplements the data with an on-site inspection of the system. Flexibility is key. Installations must not lock themselves into any one strategy," said May. The GWETER is intended to be used as guidance for mapping cost-reduction decisions rather than acting as the basis for engineering design. After carefully reviewing the choices, the next step for an installation might be to negotiate one of the suggested remediation alternatives with a federal or state agency or to begin formal engineering work. The GWETER process averages one month from project start to finished report.

May went on to say that the GWETER team is made up of individuals experienced in the design, operation and optimization of pump-and-treat systems, as well as in the regulatory aspects of Record of Decision (ROD) development and ROD modification. Depending on the installation's situation, different mixes of in-house and outside technical and regulatory experts would be utilized. The disciplines that might be required include (a) groundwater modeling and hydraulic optimization, (b) hydrogeology, (c) environmental law and ROD development, (d) process and chemical engineering, (e) innovative technology, (f) risk assessment, (g) natural attenuation processes, and (h) community relations. To date GWETER has completed 6 reviews and is scheduled to perform 8 additional reviews during fiscal year 2000.

Alternatives to Pump-and-Treat Systems

In the 1980s and early 1990s, before the potential role of natural processes in cleanup remedies were well understood, remedial strategies typically used mechanical methods to achieve cleanup goals. For example, pump-and-treat systems were used to move contaminants in groundwater to a central collection point for withdrawal, followed by treatment in aboveground facilities. It soon became apparent that pump-and-treat strategies generally do not achieve clean-up goals within a reasonable time period, and newer technologies such as air sparging and vacuum-enhanced recovery increasingly were incorporated into remedial designs. Today, with a greater focus on cost-efficient and practical approaches to groundwater clean up, in-situ treatment and natural attenuation (natural remedy for contaminated soil and ground water) have emerged as favored approaches where they are feasible.

Much has been learned during the past several years about the role natural processes play in remediating groundwater contamination. Better understanding of the chemical and biological reactions that influence groundwater has led to more accurate predictions of the fate and transport of these contaminants. In many instances natural processes can achieve groundwater cleanup goals without further human intervention, other than long-term monitoring to demonstrate that natural attenuation is performing as anticipated.

When used to treat organic contaminants, natural processes offer the additional benefit of destroying pollutants in-situ, rather than transferring them from one environmental medium to another. "In the past, cleanup programs focused on removing both free phase and residual contaminants. By moving away from rigid and often unobtainable cleanup standards to more customized, economical, site-specific, in-situ approaches, we can now remove the free product with the realization that the residual will clean up on its own. The basic premise is that to implement in-situ remediation like natural attenuation, free product has to be removed to the extent practical,"

Today, with a greater focus on cost-efficient and practical approaches to groundwater clean up, in-situ treatment and natural attenuation have emerged as favored approaches where they are feasible.

explained May.

Federal and state regulatory agencies have become increasingly pragmatic and open to new ideas concerning how to clean up contaminated sites. Regulatory changes and new technologies are yielding attractive options including risk-based cleanups, better remedial technologies, and natural attenuation, which are all becoming accepted as valid alternatives to technology-based cleanup. The GWETER is a powerful yet inexpensive cost-reduction tool. Using existing site data coupled with an on-site inspection, the review team performs a cost-benefit analysis of the current pump-and-treat system to pinpoint opportunities to reduce both the cost and duration of groundwater cleanup operations. Armed with this financial data, installations can make better return-on-investment decisions by comparing their current remediation systems to potential enhancements or system alternatives. With average cost savings ranging from thousands to millions of dollars per site, the return on investment for implementing the GWETER may prove to be substantial.

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Tribal Issues

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to develop and carry out environmental programs. The Roundtable was moderated by Jill Shibles, Chief Judge, Mashantucket Pequot Tribal Nation and National Tribal Judges Association. The Roundtable included presentations by both tribal and federal representatives on issues specific to individual tribes, federal water quality standards, air quality, and wetlands use and related permitting authority. The federal trust responsibility was a recurrent theme, and its importance emphasized by the tribes, especially as states take over more of the responsibility for environmental programs that previously rested with the federal government.

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